ELSEVIER

Journal of Nuclear Materials 218 (1995) 349–351

journal of nuclear materials

Author index

Alexa, A., T. Craciunescu, G. Mateescu and R. Dobrin, The tomographic maximum entropy method in the 3-D analysis of nuclear fuel pins 218 (1995) 139
Alexander, D.J., see Klueh, R.L. 218 (1995) 151
Anand, M.S. and B.M. Pande, Blister formation by 30 MeV helium ion irradiation in Ni–1% Cu 218 (1995) 265
Aristov, Yu.I., see Gordeeva, L.G. 218 (1995) 202

Banerjee, S., see Chakravartty, J.K. 218 (1995) 247
Barker, M.G., S.A. Frankham and P.G. Gadd, The reaction of liquid sodium with the oxides CeO_2 and Ce_2O_3 and the determination of the free energy of formation of $NaCeO_2$ and Na_2CeO_3 218 (1995) 256
Bermúdez, S.E., see Vigna, G. 218 (1994) 18
Birt, B., see Ismail, Z.H. 218 (1995) 289
Bonin, H.W., see Lewis, B.J. 218 (1994) 42

Chakravartty, J.K., G.K. Dey, S. Banerjee and Y.V.R.K. Prasad, Characterization of hot deformation behaviour of Zr–2.5Nb–0.5Cu using processing maps 218 (1995) 247
Cheburkov, V.I., see Surin, V.I. 218 (1995) 268
Chiu, S., A.A. Haasz and P. Franzen, Energy, flux and fluence dependence of methane breakup in graphite during irradiation 218 (1995) 319
Cierjacks, S., see Doran, D.G. 218 (1994) 37
Cox, B., F. Gascoin and Y.-M. Wong, Properties of thin anodic oxide films on zirconium alloys 218 (1995) 113
Cox, B., Zirconium oxidation at low temperature and pressure (Comments on a paper by X. Iltis et al., J. Nucl. Mater. 209 (1994) 180) 218 (1995) 261
Cox, B. and Y.-M. Wong, Simulating porous oxide films on zirconium alloys 218 (1995) 324
Craciunescu, T., see Alexa, A. 218 (1995) 139
Cuello, G.J., A. Fernández Guillermet, G.B. Grad, R.E. Mayer and J.R. Granada, Structural properties and stability of the bcc and omega phases in the Zr–Nb system. I. Neutron diffraction study of a quenched and aged Zr–10 wt% Nb alloy 218 (1995) 236

Daum, E., see Doran, D.G. 218 (1994) 37
Dey, G.K., see Chakravartty, J.K. 218 (1995) 247
Dobrin, R., see Alexa, A. 218 (1995) 139
Domizzi, G., see Vigna, G. 218 (1994) 18
Doran, D.G., S. Cierjacks, F.M. Mann, L.R. Greenwood and E. Daum, Neutronics comparisons of d-Li and t-H_2O neutron sources 218 (1994) 37

Eckstein, W., see García-Rosales, C. 218 (1994) 8
Evstyuhin, N.A., see Surin, V.I. 218 (1995) 268

Fernández Guillermet, A., see Cuello, G.J. 218 (1995) 236
Forcey, K.S. and A. Perujo, Tritium permeation barriers in contact with liquid lithium–lead eutectic (Pb–17Li) 218 (1995) 224
Forster, J.S., see Leslie, J.R. 218 (1995) 314
Frankham, S.A., see Barker, M.G. 218 (1995) 256
Franzen, P., see Chiu, S. 218 (1995) 319
Fukada, S., H. Minato and M. Nishikawa, Effect of nitrogen on hydrogen absorption in titanium particle beds 218 (1995) 339

Gadd, P.G., see Barker, M.G. 218 (1995) 256
García-Rosales, C., W. Eckstein and J. Roth, Revised formulae for sputtering data 218 (1994) 8
Garner, F.A., see Ohnuki, S. 218 (1995) 217
Gascoin, F., see Cox, B. 218 (1995) 113
Gordeeva, L.G., Yu.I. Aristov, E.M. Moroz, N.A. Rudina, V.I. Zaikovskii, Yu.Yu. Tanashev and V.N. Parmon, Preparation and study of porous uranium oxides as supports for new catalysts of steam reforming of methane 218 (1995) 202
Goswami, G.L., see Rama Rao, G.A. 218 (1995) 231
Grad, G.B., see Cuello, G.J. 218 (1995) 236
Granada, J.R., see Cuello, G.J. 218 (1995) 236
Greenwood, L.R., see Doran, D.G. 218 (1994) 37

Haasz, A.A., see Chiu, S. 218 (1995) 319
Heidinger, R., see Mollá, J. 218 (1995) 108
Hishinuma, A., see Ohnuki, S. 218 (1995) 217
Hiyama, T., S. Sugaya, J. Yamamoto and K. Kamimura, Determination of occluded gases in mixed oxide fuel pellets using gas sampling unit and gas chromatography 218 (1994) 1
Hodgson, E.R., see Mollá, J. 218 (1995) 108
Hood, G.M., see Sawicki, J.A. 218 (1995) 161

Ibarra, A., see Mollá, J. 218 (1995) 108
Ismail, Z.H. and B. Birt, Post-irradiation mechanical properties of an AlMgSi alloy 218 (1995) 289

Jayadevan, N.C., see Singh Mudher, K.D. 218 (1995) 166
Johnson, P.B. and D.J. Mazey, Gas-bubble superlattice formation in bcc metals 218 (1995) 273

Kamimura, K., see Hiyama, T. 218 (1994) 1
Kawamura, Y. and M. Nishikawa, Adsorption characteristics of water vapor on Li_2ZrO_3 218 (1994) 57
Keskar, M., see Singh Mudher, K.D. 218 (1995) 166
Klueh, R.L. and D.J. Alexander, Embrittlement of Cr–Mo steels after low fluence irradiation in HFIR 218 (1995) 151
Kryukov, A.M., see Nikolaeva, A.V. 218 (1994) 85
Kulkarni, S.G., see Rama Rao, G.A. 218 (1995) 231

Lanzani, L., see Vigna, G. 218 (1994) 18
Laursen, T., G.R. Palmer and G.K. Shek, Deuterium distributions on delayed hydride crack fracture surfaces of Zr–2.5Nb 218 (1995) 210
Laursen, T., see Leslie, J.R. 218 (1995) 314
Leslie, J.R., T. Laursen, J.S. Forster and R.L. Tapping, The relationship between deuterium and fluorine uptake by thin foils of Zr and its alloys etched with a weak solution of NH_4HF_2 in D_2O 218 (1995) 314
Lewis, B.J. and H.W. Bonin, Transport of volatile fission products in the fuel-to-sheath gap of defective fuel elements during normal and reactor accident conditions 218 (1994) 42
Luo, L., see Zheng, X.J. 218 (1995) 174

Manchanda, V.K., see Rama Rao, G.A. 218 (1995) 231
Mann, F.M., see Doran, D.G. 218 (1994) 37
Mateescu, G., see Alexa, A. 218 (1995) 139
Mayer, R.E., see Cuello, G.J. 218 (1995) 236
Mazey, D.J., see Johnson, P.B. 218 (1995) 273
Metzger, D.R., see Zheng, X.J. 218 (1995) 174
Minato, H., see Fukada, S. 218 (1995) 339
Mollá, J., A. Ibarra, R. Heidinger and E.R. Hodgson, Electron-irradiated silicon: An optimized material for gyrotron windows 218 (1995) 108
Moroz, E.M., see Gordeeva, L.G. 218 (1995) 202
Mszanowski, U., see Wu, C.H. 218 (1995) 293

Nakatani, M., see Tanaka, S. 218 (1995) 335
Nicolaou, G., see Walker, C.T. 218 (1995) 129
Nikolaev, Yu.A., see Nikolaeva, A.V. 218 (1994) 85
Nikolaeva, A.V., Yu.A. Nikolaev and A.M. Kryukov, The contribution of grain boundary effects to low-alloy steel irradiation embrittlement 218 (1994) 85
Nishikawa, M., see Kawamura, Y. 218 (1994) 57
Nishikawa, M., see Fukada, S. 218 (1995) 339

Ohnuki, S., H. Takahashi, K. Shiba, A. Hishinuma, J.E. Pawel and F.A. Garner, Influence of transmutation on microstructure, density change, and embrittlement of vanadium and vanadium alloys irradiated in HFIR 218 (1995) 217
Ovejero-García, J., see Vigna, G. 218 (1994) 18

Palmer, G.R., see Laursen, T. 218 (1995) 210
Pande, B.M., see Anand, M.S. 218 (1995) 265
Paraschiv, A., see Paraschiv, M.C. 218 (1994) 66
Paraschiv, M.C. and A. Paraschiv, A theoretical study of fission products release from oxide fuels taking into account both grain growth and precursors effect 218 (1994) 66
Parmon, V.N., see Gordeeva, L.G. 218 (1995) 202
Pawel, J.E., see Ohnuki, S. 218 (1995) 217
Pawel, S.J., Observations of containment corrosion in the vapor over lithium hydride in the temperature range 600–800°C 218 (1995) 302
Perujo, A., see Forcey, K.S. 218 (1995) 224
Piotrkowski, R., see Vigna, G. 218 (1994) 18
Potter, D.I., see Steele, J.K. 218 (1995) 95
Prasad, Y.V.R.K., see Chakravartty, J.K. 218 (1995) 247
Pulham, R.J. and M.W. Richards, Chemical reactions of dicaesium telluride, Cs_2Te, and of dicaesium telluride/caesium mixtures with zirconium and with Zircaloy-4 218 (1995) 143
Puls, M.P., see Shi, S.-Q. 218 (1994) 30
Puls, M.P., see Shi, S.-Q. 218 (1995) 189

Rama Rao, G.A., S.G. Kulkarni, V. Venugopal, V.K. Manchanda and G.L. Goswami, Measurement of void volume of a fuel rod and the exchange of occluded gases from mixed carbide fuel with filling gas helium 218 (1995) 231
Richards, M.W., see Pulham, R.J. 218 (1995) 143
Roth, J., see García-Rosales, C. 218 (1994) 8
Rudina, N.A., see Gordeeva, L.G. 218 (1995) 202

Sauve, R.G., see Zheng, X.J. 218 (1995) 174
Sawicki, J.A., G.M. Hood, H. Zou and R.J. Schultz, A Mössbauer study of single-crystal Zr–0.065 at% ^{57}Fe 218 (1995) 161
Schultz, R.J., see Sawicki, J.A. 218 (1995) 161
Shek, G.K., see Shi, S.-Q. 218 (1995) 189
Shek, G.K., see Laursen, T. 218 (1995) 210
Shi, S.-Q. and M.P. Puls, Dependence of the threshold stress intensity factor on hydrogen concentration during delayed hydride cracking in zirconium alloys 218 (1994) 30
Shi, S.-Q., G.K. Shek and M.P. Puls, Hydrogen concentration limit and critical temperatures for delayed hydride cracking in zirconium alloys 218 (1995) 189
Shiba, K., see Ohnuki, S. 218 (1995) 217
Singh Mudher, K.D., M. Keskar and N.C. Jayadevan, Solid state reactions of uranium oxides with ammonium sulphate 218 (1995) 166
Steele, J.K. and D.I. Potter, The disappearance of voids during 180 keV Ni^+ bombardment of nickel 218 (1995) 95

Sugaya, S., see Hiyama, T. 218 (1994) 1
Surin, V.I., N.A. Evstyuhin and V.I. Cheburkov, Conductivity of fission-damaged uranium nitride 218 (1995) 268

Takahashi, H., see Ohnuki, S. 218 (1995) 217
Tanaka, S., M. Taniguchi, M. Nakatani, D. Yamaki and M. Yamawaki, In situ observation of surface –OH and –OD on lithium oxide 218 (1995) 335
Tanashev, Yu.Yu., see Gordeeva, L.G. 218 (1995) 202
Taniguchi, M., see Tanaka, S. 218 (1995) 335
Tapping, R.L., see Leslie, J.R. 218 (1995) 314

Venugopal, V., see Rama Rao, G.A. 218 (1995) 231
Vigna, G., L. Lanzani, G. Domizzi, S.E. Bermúdez, J. Ovejero-García and R. Piotrkowski, Effect of carbides on the hydriding and oxidation behavior of a Zr–2.5Nb alloy 218 (1994) 18

Walker, C.T. and G. Nicolaou, Transmutation of neptunium and americium in a fast neutron flux: EPMA results and KORIGEN predictions for the superfact fuels 218 (1995) 129
Wong, Y.-M., see Cox, B. 218 (1995) 113
Wong, Y.-M., see Cox, B. 218 (1995) 324
Wu, C.H. and U. Mszanowski, A comparison of lifetimes of beryllium, carbon, molybdenum and tungsten as divertor armour materials 218 (1995) 293

Yamaki, D., see Tanaka, S. 218 (1995) 335
Yamamoto, J., see Hiyama, T. 218 (1994) 1
Yamawaki, M., see Tanaka, S. 218 (1995) 335

Zaikovskii, V.I., see Gordeeva, L.G. 218 (1995) 202
Zheng, X.J., L. Luo, D.R. Metzger and R.G. Sauve, A unified model of hydride cracking based on elasto-plastic energy release rate over a finite crack extension 218 (1995) 174
Zou, H., see Sawicki, J.A. 218 (1995) 161

ELSEVIER

Journal of Nuclear Materials 218 (1995) 353–358

journal of nuclear materials

Subject index

Actinides *(excludes Plutonium, Thorium and Uranium)*
Transmutation of neptunium and americium in a fast neutron flux: EPMA results and KORIGEN predictions for the superfact fuels, C.T. Walker and G. Nicolaou 218 (1995) 129

Adsorption
Adsorption characteristics of water vapor on Li_2ZrO_3, Y. Kawamura and M. Nishikawa 218 (1994) 57
In situ observation of surface –OH and –OD on lithium oxide, S. Tanaka, M. Taniguchi, M. Nakatani, D. Yamaki and M. Yamawaki 218 (1995) 335

Aluminum, Aluminum Alloys and Compounds
Post-irradiation mechanical properties of an AlMgSi alloy, Z.H. Ismail and B. Birt 218 (1995) 289

Analytical Instruments and Methods
Determination of occluded gases in mixed oxide fuel pellets using gas sampling unit and gas chromatography, T. Hiyama, S. Sugaya, J. Yamamoto and K. Kamimura 218 (1994) 1
Properties of thin anodic oxide films on zirconium alloys, B. Cox, F. Gascoin and Y.-M. Wong 218 (1995) 113
A Mössbauer study of single-crystal Zr–0.065 at% ^{57}Fe, J.A. Sawicki, G.M. Hood, H. Zou and R.J. Schultz 218 (1995) 161
Solid state reactions of uranium oxides with ammonium sulphate, K.D. Singh Mudher, M. Keskar and N.C. Jayadevan 218 (1995) 166
Deuterium distributions on delayed hydride crack fracture surfaces of Zr–2.5Nb, T. Laursen, G.R. Palmer and G.K. Shek 218 (1995) 210
Structural properties and stability of the bcc and omega phases in the Zr–Nb system. I. Neutron diffraction study of a quenched and aged Zr–10 wt% Nb alloy, G.J. Cuello, A. Fernández Guillermet, G.B. Grad, R.E. Mayer and J.R. Granada 218 (1995) 236
Simulating porous oxide films on zirconium alloys, B. Cox and Y.-M. Wong 218 (1995) 324

Beryllium, Beryllium Alloys and Compounds
A comparison of lifetimes of beryllium, carbon, molybdenum and tungsten as divertor armour materials, C.H. Wu and U. Mszanowski 218 (1995) 293

Breeding Materials
Adsorption characteristics of water vapor on Li_2ZrO_3, Y. Kawamura and M. Nishikawa 218 (1994) 57
Tritium permeation barriers in contact with liquid lithium–lead eutectic (Pb–17Li), K.S. Forcey and A. Perujo 218 (1995) 224
In situ observation of surface –OH and –OD on lithium oxide, S. Tanaka, M. Taniguchi, M. Nakatani, D. Yamaki and M. Yamawaki 218 (1995) 335

Carbon
A comparison of lifetimes of beryllium, carbon, molybdenum and tungsten as divertor armour materials, C.H. Wu and U. Mszanowski 218 (1995) 293
Energy, flux and fluence dependence of methane breakup in graphite during irradiation, S. Chiu, A.A. Haasz and P. Franzen 218 (1995) 319

Cavities *(includes Voids, Holes)*
The disappearance of voids during 180 keV Ni^+ bombardment of nickel, J.K. Steele and D.I. Potter 218 (1995) 95
Gas-bubble superlattice formation in bcc metals, P.B. Johnson and D.J. Mazey 218 (1995) 273

Chemical Reactions *(includes Electrochemical and Thermochemical Reactions)*
Effect of carbides on the hydriding and oxidation behavior of a Zr–2.5Nb alloy, G. Vigna, L. Lanzani, G. Domizzi, S.E. Bermúdez, J. Ovejero-García and R. Piotrkowski 218 (1994) 18
Solid state reactions of uranium oxides with ammonium sulphate, K.D. Singh Mudher, M. Keskar and N.C. Jayadevan 218 (1995) 166
Zirconium oxidation at low temperature and pressure (Comments on a paper by X. Iltis et al., J. Nucl. Mater. 209 (1994) 180), B. Cox 218 (1995) 261
Simulating porous oxide films on zirconium alloys, B. Cox and Y.-M. Wong 218 (1995) 324

Cladding Materials
Properties of thin anodic oxide films on zirconium alloys, B. Cox, F. Gascoin and Y.-M. Wong 218 (1995) 113
Chemical reactions of dicaesium telluride, Cs_2Te, and of dicaesium telluride/caesium mixtures with zirconium and with Zircaloy-4, R.J. Pulham and M.W. Richards 218 (1995) 143
Structural properties and stability of the bcc and omega phases in the Zr–Nb system. I. Neutron diffraction study of a quenched and aged Zr–10 wt% Nb alloy, G.J. Cuello, A. Fernández Guillermet, G.B. Grad, R.E. Mayer and J.R. Granada 218 (1995) 236

Compatibility and Corrosion *(includes Stress Corrosion Cracking)*
Properties of thin anodic oxide films on zirconium alloys, B. Cox, F. Gascoin and Y.-M. Wong 218 (1995) 113
Chemical reactions of dicaesium telluride, Cs_2Te, and of dicaesium telluride/caesium mixtures with zirconium and with Zircaloy-4, R.J. Pulham and M.W. Richards 218 (1995) 143
Zirconium oxidation at low temperature and pressure (Comments on a paper by X. Iltis et al., J. Nucl. Mater. 209 (1994) 180), B. Cox 218 (1995) 261
Observations of containment corrosion in the vapor over lithium hydride in the temperature range 600–800°C, S.J. Pawel 218 (1995) 302
Simulating porous oxide films on zirconium alloys, B. Cox and Y.-M. Wong 218 (1995) 324

Deformation
Characterization of hot deformation behaviour of Zr–2.5Nb–0.5Cu using processing maps, J.K. Chakravartty, G.K. Dey, S. Banerjee and Y.V.R.K. Prasad 218 (1995) 247

Diffusion
A Mössbauer study of single-crystal Zr–0.065 at% ^{57}Fe, J.A. Sawicki, G.M. Hood, H. Zou and R.J. Schultz 218 (1995) 161
The relationship between deuterium and fluorine uptake by thin foils of Zr and its alloys etched with a weak solution of NH_4HF_2 in D_2O, J.R. Leslie, T. Laursen, J.S. Forster and R.L. Tapping 218 (1995) 314

Dosimetry
Neutronics comparisons of d-Li and t-H_2O neutron sources, D.G. Doran, S. Cierjacks, F.M. Mann, L.R. Greenwood and E. Daum 218 (1994) 37

Electrical Properties
Electron-irradiated silicon: An optimized material for gyrotron windows, J. Mollá, A. Ibarra, R. Heidinger and E.R. Hodgson 218 (1995) 108
Conductivity of fission-damaged uranium nitride, V.I. Surin, N.A. Evstyuhin and V.I. Cheburkov 218 (1995) 268

Electron Irradiation
Electron-irradiated silicon: An optimized material for gyrotron windows, J. Mollá, A. Ibarra, R. Heidinger and E.R. Hodgson 218 (1995) 108

Embrittlement
The contribution of grain boundary effects to low-alloy steel irradiation embrittlement, A.V. Nikolaeva, Yu.A. Nikolaev and A.M. Kryukov 218 (1994) 85
Influence of transmutation on microstructure, density change, and embrittlement of vanadium and vanadium alloys irradiated in HFIR, S. Ohnuki, H. Takahashi, K. Shiba, A. Hishinuma, J.E. Pawel and F.A. Garner 218 (1995) 217

Fast Reactors
Measurement of void volume of a fuel rod and the exchange of occluded gases from mixed carbide fuel with filling gas helium, G.A. Rama Rao, S.G. Kulkarni, V. Venugopal, V.K. Manchanda and G.L. Goswami 218 (1995) 231
The reaction of liquid sodium with the oxides CeO_2 and Ce_2O_3 and the determination of the free energy of formation of $NaCeO_2$ and Na_2CeO_3, M.G. Barker, S.A. Frankham and P.G. Gadd 218 (1995) 256

Fission Products
Transport of volatile fission products in the fuel-to-sheath gap of defective fuel elements during normal and reactor accident conditions, B.J. Lewis and H.W. Bonin 218 (1994) 42
A theoretical study of fission products release from oxide fuels taking into account both grain growth and precursors effect, M.C. Paraschiv and A. Paraschiv 218 (1994) 66
The tomographic maximum entropy method in the 3-D analysis of nuclear fuel pins, A. Alexa, T. Craciunescu, G. Mateescu and R. Dobrin 218 (1995) 139
Chemical reactions of dicaesium telluride, Cs_2Te, and of dicaesium telluride/caesium mixtures with zirconium and with Zircaloy-4, R.J. Pulham and M.W. Richards 218 (1995) 143
The reaction of liquid sodium with the oxides CeO_2 and Ce_2O_3 and the determination of the free energy of formation of $NaCeO_2$ and Na_2CeO_3, M.G. Barker, S.A. Frankham and P.G. Gadd 218 (1995) 256

Fracture and Fracture Toughness
Dependence of the threshold stress intensity factor on hydrogen concentration during delayed hydride cracking in zirconium alloys, S.-Q. Shi and M.P. Puls 218 (1994) 30
Embrittlement of Cr–Mo steels after low fluence irradiation in HFIR, R.L. Klueh and D.J. Alexander 218 (1995) 151
A unified model of hydride cracking based on elasto-plastic energy release rate over a finite crack extension, X.J. Zheng, L. Luo, D.R. Metzger and R.G. Sauve 218 (1995) 174
Hydrogen concentration limit and critical temperatures for delayed hydride cracking in zirconium alloys, S.-Q. Shi, G.K. Shek and M.P. Puls 218 (1995) 189
Deuterium distributions on delayed hydride crack fracture surfaces of Zr–2.5Nb, T. Laursen, G.R. Palmer and G.K. Shek 218 (1995) 210

Fuels and Fuel Elements
Transport of volatile fission products in the fuel-to-sheath gap of defective fuel elements during normal and reactor accident conditions, B.J. Lewis and H.W. Bonin 218 (1994) 42
A theoretical study of fission products release from oxide fuels taking into account both grain growth and precursors effect, M.C. Paraschiv and A. Paraschiv 218 (1994) 66
Transmutation of neptunium and americium in a fast neutron flux: EPMA results and KORIGEN predictions for the superfact fuels, C.T. Walker and G. Nicolaou 218 (1995) 129
Solid state reactions of uranium oxides with ammonium sulphate, K.D. Singh Mudher, M. Keskar and N.C. Jayadevan 218 (1995) 166
Measurement of void volume of a fuel rod and the exchange of occluded gases from mixed carbide fuel with filling gas helium, G.A. Rama Rao, S.G. Kulkarni, V. Venugopal, V.K. Manchanda and G.L. Goswami 218 (1995) 231
Conductivity of fission-damaged uranium nitride, V.I. Surin, N.A. Evstyuhin and V.I. Cheburkov 218 (1995) 268

Fusion Reactors
Neutronics comparisons of d-Li and t-H_2O neutron sources, D.G. Doran, S. Cierjacks, F.M. Mann, L.R. Greenwood and E. Daum 218 (1994) 37

Gases *(excludes Hydrogen, Helium and Tritium)* **in Materials**
Determination of occluded gases in mixed oxide fuel pellets using gas sampling unit and gas chromatography, T. Hiyama, S. Sugaya, J. Yamamoto and K. Kamimura 218 (1994) 1
A theoretical study of fission products release from oxide fuels taking into account both grain growth and precursors effect, M.C. Paraschiv and A. Paraschiv 218 (1994) 66

Grain Boundaries
The contribution of grain boundary effects to low-alloy steel irradiation embrittlement, A.V. Nikolaeva, Yu.A. Nikolaev and A.M. Kryukov 218 (1994) 85

Helium
Blister formation by 30 MeV helium ion irradiation in Ni–1% Cu, M.S. Anand and B.M. Pande 218 (1995) 265
Energy, flux and fluence dependence of methane breakup in graphite during irradiation, S. Chiu, A.A. Haasz and P. Franzen 218 (1995) 319

Hydrogen and Hydrides *(includes Deuterium and Deuterides)*
Dependence of the threshold stress intensity factor on hydrogen concentration during delayed hydride cracking in zirconium alloys, S.-Q. Shi and M.P. Puls 218 (1994) 30
A unified model of hydride cracking based on elasto-plastic energy release rate over a finite crack extension, X.J. Zheng, L. Luo, D.R. Metzger and R.G. Sauve 218 (1995) 174
Hydrogen concentration limit and critical temperatures for delayed hydride cracking in zirconium alloys, S.-Q. Shi, G.K. Shek and M.P. Puls 218 (1995) 189
Deuterium distributions on delayed hydride crack fracture surfaces of Zr–2.5Nb, T. Laursen, G.R. Palmer and G.K. Shek 218 (1995) 210
Tritium permeation barriers in contact with liquid lithium–lead eutectic (Pb–17Li), K.S. Forcey and A. Perujo 218 (1995) 224
The relationship between deuterium and fluorine uptake by thin foils of Zr and its alloys etched with a weak solution of NH_4HF_2 in D_2O, J.R. Leslie, T. Laursen, J.S. Forster and R.L. Tapping 218 (1995) 314
Energy, flux and fluence dependence of methane breakup in graphite during irradiation, S. Chiu, A.A. Haasz and P. Franzen 218 (1995) 319
Effect of nitrogen on hydrogen absorption in titanium particle beds, S. Fukada, H. Minato and M. Nishikawa 218 (1995) 339
In situ observation of surface –OH and –OD on lithium oxide, S. Tanaka, M. Taniguchi, M. Nakatani, D. Yamaki and M. Yamawaki 218 (1995) 335

Impurities
Measurement of void volume of a fuel rod and the exchange of occluded gases from mixed carbide fuel with filling gas helium, G.A. Rama Rao, S.G. Kulkarni, V. Venugopal, V.K. Manchanda and G.L. Goswami 218 (1995) 231

Ion Irradiation
Revised formulae for sputtering data, C. García-Rosales, W. Eckstein and J. Roth 218 (1994) 8
The disappearance of voids during 180 keV Ni^+ bombardment of nickel, J.K. Steele and D.I. Potter 218 (1995) 95
Blister formation by 30 MeV helium ion irradiation in Ni–1% Cu, M.S. Anand and B.M. Pande 218 (1995) 265
Gas-bubble superlattice formation in bcc metals, P.B. Johnson and D.J. Mazey 218 (1995) 273
The relationship between deuterium and fluorine uptake by thin foils of Zr and its alloys etched with a weak solution of NH_4HF_2 in D_2O, J.R. Leslie, T. Laursen, J.S. Forster and R.L. Tapping 218 (1995) 314
Energy, flux and fluence dependence of methane breakup in graphite during irradiation, S. Chiu, A.A. Haasz and P. Franzen 218 (1995) 319

Liquid Metals
The reaction of liquid sodium with the oxides CeO_2 and Ce_2O_3 and the determination of the free energy of formation of $NaCeO_2$ and Na_2CeO_3, M.G. Barker, S.A. Frankham and P.G. Gadd 218 (1995) 256

Mathematical and Computational Methods
Revised formulae for sputtering data, C. García-Rosales, W. Eckstein and J. Roth 218 (1994) 8
The tomographic maximum entropy method in the 3-D analysis of nuclear fuel pins, A. Alexa, T. Craciunescu, G. Mateescu and R. Dobrin 218 (1995) 139

Mechanical Properties *(not listed elsewhere)*
Post-irradiation mechanical properties of an AlMgSi alloy, Z.H. Ismail and B. Birt 218 (1995) 289

Metals, Alloys and Compounds *(not listed elsewhere)*
Gas-bubble superlattice formation in bcc metals, P.B. Johnson and D.J. Mazey 218 (1995) 273

Moderator and Reflector Materials
Observations of containment corrosion in the vapor over lithium hydride in the temperature range 600–800°C, S.J. Pawel 218 (1995) 302

Molybdenum, Molybdenum Alloys and Compounds
A comparison of lifetimes of beryllium, carbon, molybdenum and tungsten as divertor armour materials, C.H. Wu and U. Mszanowski 218 (1995) 293

Neutron Irradiation
Neutronics comparisons of d-Li and t-H_2O neutron sources, D.G. Doran, S. Cierjacks, F.M. Mann, L.R. Greenwood and E. Daum 218 (1994) 37
The contribution of grain boundary effects to low-alloy steel irradiation embrittlement, A.V. Nikolaeva, Yu.A. Nikolaev and A.M. Kryukov 218 (1994) 85
Embrittlement of Cr–Mo steels after low fluence irradiation in HFIR, R.L. Klueh and D.J. Alexander 218 (1995) 151
Influence of transmutation on microstructure, density change, and embrittlement of vanadium and vanadium alloys irradiated in HFIR, S. Ohnuki, H. Takahashi, K. Shiba, A. Hishinuma, J.E. Pawel and F.A. Garner 218 (1995) 217
Conductivity of fission-damaged uranium nitride, V.I. Surin, N.A. Evstyuhin and V.I. Cheburkov 218 (1995) 268
Post-irradiation mechanical properties of an AlMgSi alloy, Z.H. Ismail and B. Birt 218 (1995) 289

Nickel, Nickel Alloys and Compounds
The disappearance of voids during 180 keV Ni^+ bombardment of nickel, J.K. Steele and D.I. Potter 218 (1995) 95
Blister formation by 30 MeV helium ion irradiation in Ni–1% Cu, M.S. Anand and B.M. Pande 218 (1995) 265

Niobium, Niobium Alloys and Compounds
Effect of carbides on the hydriding and oxidation behavior of a Zr–2.5Nb alloy, G. Vigna, L. Lanzani, G. Domizzi, S.E. Bermúdez, J. Ovejero-García and R. Piotrkowski 218 (1994) 18

Permeation
Tritium permeation barriers in contact with liquid lithium–lead eutectic (Pb–17Li), K.S. Forcey and A. Perujo 218 (1995) 224

Phase Equilibria *(includes Constitution, Phase Stability, Phase Instability)*
A Mössbauer study of single-crystal Zr–0.065 at% ^{57}Fe, J.A. Sawicki, G.M. Hood, H. Zou and R.J. Schultz 218 (1995) 161
Structural properties and stability of the bcc and omega phases in the Zr–Nb system. I. Neutron diffraction study of a quenched and aged Zr–10 wt% Nb alloy, G.J. Cuello, A. Fernández Guillermet, G.B. Grad, R.E. Mayer and J.R. Granada 218 (1995) 236

Physical Properties *(not listed elsewhere)*
Revised formulae for sputtering data, C. García-Rosales, W. Eckstein and J. Roth 218 (1994) 8

Plasma–Materials Interaction
Energy, flux and fluence dependence of methane breakup in graphite during irradiation, S. Chiu, A.A. Haasz and P. Franzen 218 (1995) 319

Plutonium, Plutonium Alloys and Compounds
Determination of occluded gases in mixed oxide fuel pellets using gas sampling unit and gas chromatography, T. Hiyama, S. Sugaya, J. Yamamoto and K. Kamimura 218 (1994) 1
Transmutation of neptunium and americium in a fast neutron flux: EPMA results and KORIGEN predictions for the superfact fuels, C.T. Walker and G. Nicolaou 218 (1995) 129

Pores *(includes Porosity, Fabrication Pores)*
Preparation and study of porous uranium oxides as supports for new catalysts of steam reforming of methane, L.G. Gordeeva, Yu.I. Aristov, E.M. Moroz, N.A. Rudina, V.I. Zaikovskii, Yu.Yu. Tanashev and V.N. Parmon 218 (1995) 202
Measurement of void volume of a fuel rod and the exchange of occluded gases from mixed carbide fuel with filling gas helium, G.A. Rama Rao, S.G. Kulkarni, V. Venugopal, V.K. Manchanda and G.L. Goswami 218 (1995) 231

Pressure Vessels
The contribution of grain boundary effects to low-alloy steel irradiation embrittlement, A.V. Nikolaeva, Yu.A. Nikolaev and A.M. Kryukov 218 (1994) 85

Radiation Effects: Extended Defects, Microstructures
The disappearance of voids during 180 keV Ni^+ bombardment of nickel, J.K. Steele and D.I. Potter 218 (1995) 95

Radiation Effects: Mechanical Properties
Embrittlement of Cr–Mo steels after low fluence irradiation in HFIR, R.L. Klueh and D.J. Alexander 218 (1995) 151
Influence of transmutation on microstructure, density change, and embrittlement of vanadium and vanadium alloys irradiated in HFIR, S. Ohnuki, H. Takahashi, K. Shiba, A. Hishinuma, J.E. Pawel and F.A. Garner 218 (1995) 217

Radiation Sources
Neutronics comparisons of d-Li and t-H_2O neutron sources, D.G. Doran, S. Cierjacks, F.M. Mann, L.R. Greenwood and E. Daum 218 (1994) 37

Silicon and Silicon Compounds
Electron-irradiated silicon: An optimized material for gyrotron windows, J. Mollá, A. Ibarra, R. Heidinger and E.R. Hodgson 218 (1995) 108

Steels, Austenitic
Tritium permeation barriers in contact with liquid lithium–lead eutectic (Pb–17Li), K.S. Forcey and A. Perujo 218 (1995) 224
Observations of containment corrosion in the vapor over lithium hydride in the temperature range 600–800°C, S.J. Pawel 218 (1995) 302

Steels, Ferritic
Embrittlement of Cr–Mo steels after low fluence irradiation in HFIR, R.L. Klueh and D.J. Alexander 218 (1995) 151

Surface Effects
Preparation and study of porous uranium oxides as supports for new catalysts of steam reforming of methane, L.G. Gordeeva, Yu.I. Aristov, E.M. Moroz, N.A. Rudina, V.I. Zaikovskii, Yu.Yu. Tanashev and V.N. Parmon 218 (1995) 202
Blister formation by 30 MeV helium ion irradiation in Ni–1% Cu, M.S. Anand and B.M. Pande 218 (1995) 265
A comparison of lifetimes of beryllium, carbon, molybdenum and tungsten as divertor armour materials, C.H. Wu and U. Mszanowski 218 (1995) 293

Theory and Modelling
Dependence of the threshold stress intensity factor on hydrogen concentration during delayed hydride cracking in zirconium alloys, S.-Q. Shi and M.P. Puls 218 (1994) 30
Transport of volatile fission products in the fuel-to-sheath gap of defective fuel elements during normal and reactor accident conditions, B.J. Lewis and H.W. Bonin 218 (1994) 42
The contribution of grain boundary effects to low-alloy steel irradiation embrittlement, A.V. Nikolaeva, Yu.A. Nikolaev and A.M. Kryukov 218 (1994) 85
A unified model of hydride cracking based on elasto-plastic energy release rate over a finite crack extension, X.J. Zheng, L. Luo, D.R. Metzger and R.G. Sauve 218 (1995) 174

Thermal Reactors
Chemical reactions of dicaesium telluride, Cs_2Te, and of dicaesium telluride/caesium mixtures with zirconium and with Zircaloy-4, R.J. Pulham and M.W. Richards 218 (1995) 143

Thermodynamic Properties
The reaction of liquid sodium with the oxides CeO_2 and Ce_2O_3 and the determination of the free energy of formation of $NaCeO_2$ and Na_2CeO_3, M.G. Barker, S.A. Frankham and P.G. Gadd 218 (1995) 256

Titanium, Titanium Alloys and Compounds
Effect of nitrogen on hydrogen absorption in titanium particle beds, S. Fukada, H. Minato and M. Nishikawa 218 (1995) 339

Tritium and Tritides

Adsorption characteristics of water vapor on Li_2ZrO_3, Y. Kawamura and M. Nishikawa 218 (1994) 57

In situ observation of surface –OH and –OD on lithium oxide, S. Tanaka, M. Taniguchi, M. Nakatani, D. Yamaki and M. Yamawaki 218 (1995) 335

Tungsten, Tungsten Alloys and Compounds

A comparison of lifetimes of beryllium, carbon, molybdenum and tungsten as divertor armour materials, C.H. Wu and U. Mszanowski 218 (1995) 293

Uranium, Uranium Alloys and Compounds

Determination of occluded gases in mixed oxide fuel pellets using gas sampling unit and gas chromatography, T. Hiyama, S. Sugaya, J. Yamamoto and K. Kamimura 218 (1994) 1

The tomographic maximum entropy method in the 3-D analysis of nuclear fuel pins, A. Alexa, T. Craciunescu, G. Mateescu and R. Dobrin 218 (1995) 139

Solid state reactions of uranium oxides with ammonium sulphate, K.D. Singh Mudher, M. Keskar and N.C. Jayadevan 218 (1995) 166

Preparation and study of porous uranium oxides as supports for new catalysts of steam reforming of methane, L.G. Gordeeva, Yu.I. Aristov, E.M. Moroz, N.A. Rudina, V.I. Zaikovskii, Yu.Yu. Tanashev and V.N. Parmon 218 (1995) 202

Conductivity of fission-damaged uranium nitride, V.I. Surin, N.A. Evstyuhin and V.I. Cheburkov 218 (1995) 268

Vanadium, Vanadium Alloys and Compounds

Influence of transmutation on microstructure, density change, and embrittlement of vanadium and vanadium alloys irradiated in HFIR, S. Ohnuki, H. Takahashi, K. Shiba, A. Hishinuma, J.E. Pawel and F.A. Garner 218 (1995) 217

Zirconium, Zirconium Alloys and Compounds

Effect of carbides on the hydriding and oxidation behavior of a Zr–2.5Nb alloy, G. Vigna, L. Lanzani, G. Domizzi, S.E. Bermúdez, J. Ovejero-García and R. Piotrkowski 218 (1994) 18

Dependence of the threshold stress intensity factor on hydrogen concentration during delayed hydride cracking in zirconium alloys, S.-Q. Shi and M.P. Puls 218 (1994) 30

Transport of volatile fission products in the fuel-to-sheath gap of defective fuel elements during normal and reactor accident conditions, B.J. Lewis and H.W. Bonin 218 (1994) 42

Properties of thin anodic oxide films on zirconium alloys, B. Cox, F. Gascoin and Y.-M. Wong 218 (1995) 113

Chemical reactions of dicaesium telluride, Cs_2Te, and of dicaesium telluride/caesium mixtures with zirconium and with Zircaloy-4, R.J. Pulham and M.W. Richards 218 (1995) 143

A Mössbauer study of single-crystal Zr–0.065 at% ^{57}Fe, J.A. Sawicki, G.M. Hood, H. Zou and R.J. Schultz 218 (1995) 161

A unified model of hydride cracking based on elasto-plastic energy release rate over a finite crack extension, X.J. Zheng, L. Luo, D.R. Metzger and R.G. Sauve 218 (1995) 174

Hydrogen concentration limit and critical temperatures for delayed hydride cracking in zirconium alloys, S.-Q. Shi, G.K. Shek and M.P. Puls 218 (1995) 189

Deuterium distributions on delayed hydride crack fracture surfaces of Zr–2.5Nb, T. Laursen, G.R. Palmer and G.K. Shek 218 (1995) 210

Structural properties and stability of the bcc and omega phases in the Zr–Nb system. I. Neutron diffraction study of a quenched and aged Zr–10 wt% Nb alloy, G.J. Cuello, A. Fernández Guillermet, G.B. Grad, R.E. Mayer and J.R. Granada 218 (1995) 236

Characterization of hot deformation behaviour of Zr–2.5Nb–0.5Cu using processing maps, J.K. Chakravartty, G.K. Dey, S. Banerjee and Y.V.R.K. Prasad 218 (1995) 247

Zirconium oxidation at low temperature and pressure (Comments on a paper by X. Iltis et al., J. Nucl. Mater. 209 (1994) 180), B. Cox 218 (1995) 261

The relationship between deuterium and fluorine uptake by thin foils of Zr and its alloys etched with a weak solution of NH_4HF_2 in D_2O, J.R. Leslie, T. Laursen, J.S. Forster and R.L. Tapping 218 (1995) 314

Simulating porous oxide films on zirconium alloys, B. Cox and Y.-M. Wong 218 (1995) 324